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## ABSTRACT

Modified oligonucleotides having a GGG motif sequence and a sufficient number of flanking nucleotides to modulate the telomere length of a chromosome are provided. Methods of modulating telomere length of a mammalian chromosome *in vitro* and *in vivo* are also provided, as are methods for inhibiting the division of a malignant mammalian cell and for modulating the effects of cellular aging.